The Mortgage Holding Subsidiary Concept: A Structure for Efficient Fixed-Rate Housing Finance

By Bert Ely[1]

INTRODUCTION

Although housing finance systems vary greatly across countries, reflecting differences in how these systems have evolved over the decades, recent initiatives to modernize housing finance have three underlying objectives: greater efficiency, increased choice in the mortgage products offered to homeowners, and greater safety and stability within a country's financial system.

The "mortgage holding subsidiary" (MHS) concept represents an organizational structure for achieving those characteristics, specifically in providing long-term, fixed-rate mortgages to homeowners. The MHS concept initially was developed to complement a proposal to privatize three government-sponsored housing finance enterprises in the United States – Fannie Mae, Freddie Mac, and the Federal Home Loan Banks.[2] However, the MHS concept is easily universalized so that it can be applied in any country which already has a well-developed credit market for financing owner-occupied housing. Properly implemented, the MHS concept should safely deliver more efficient housing finance than mortgage securitization or covered bond arrangements while producing longer-term, fixed-rate housing finance than is feasible with bank-like short-term deposits. This article will first explain the MHS concept and then discusses the types of cost savings MHS can deliver.

This is an especially appropriate time to consider the MHS concept since housing finance is undergoing enormous change in much of the world, and particularly in Europe.[3] In particular, market forces are being unleashed to reduce housing finance costs while broadening the range of mortgage products made available to homeowners. The MHS concept fits squarely in the middle of what is emerging in housing finance.

THE MORTGAGE HOLDING SUBSIDIARY CONCEPT

The MHS concept is quite simple, which is the essence of its efficiency — banks, savings institutions, and other financial intermediaries subject to capital regulation would form MHS to own long-term, fixed-rate residential mortgages originated by the parent institution. Shortly after a mortgage is originated, the parent would sell it to its MHS. MHS would be barred from accepting deposits or deposit-like funds from the general public. Instead, they would fund themselves entirely in the capital markets through the sale of mortgage bonds and other types of debt instruments. Because MHS would fund themselves in this manner, they should not be subject to capital regulation or other forms of bank-like safety-and-soundness supervision. In effect, MHS would strictly be passive financing vehicles with no broad public interaction.

Figure 1 illustrates the relationship of an MHS to its parent bank or thrift, showing the parent-subsidiary relationship. **Figure 2** illustrates the likely balance-sheet composition of an MHS. Assets would consist almost entirely of residential mortgages while funding would consist of various forms of debt, issued in whatever form made economic sense at the time. The MHS would be capitalized with sufficient equity capital to permit it to obtain a high debt rating (at least AA) on a freestanding basis. That is, the MHS would not look to its parent for back-up capital support. The MHS's capital level would be entirely marketplace-determined. While Basel II is intended to reduce the amount of capital backing banks must hold for the residential mortgages they own, the capital markets can be much more precise in determining the amount of capital backing a particularly MHS should have since that capital level would depend upon the amount of credit and interest-rate risk that the MHS had assumed.

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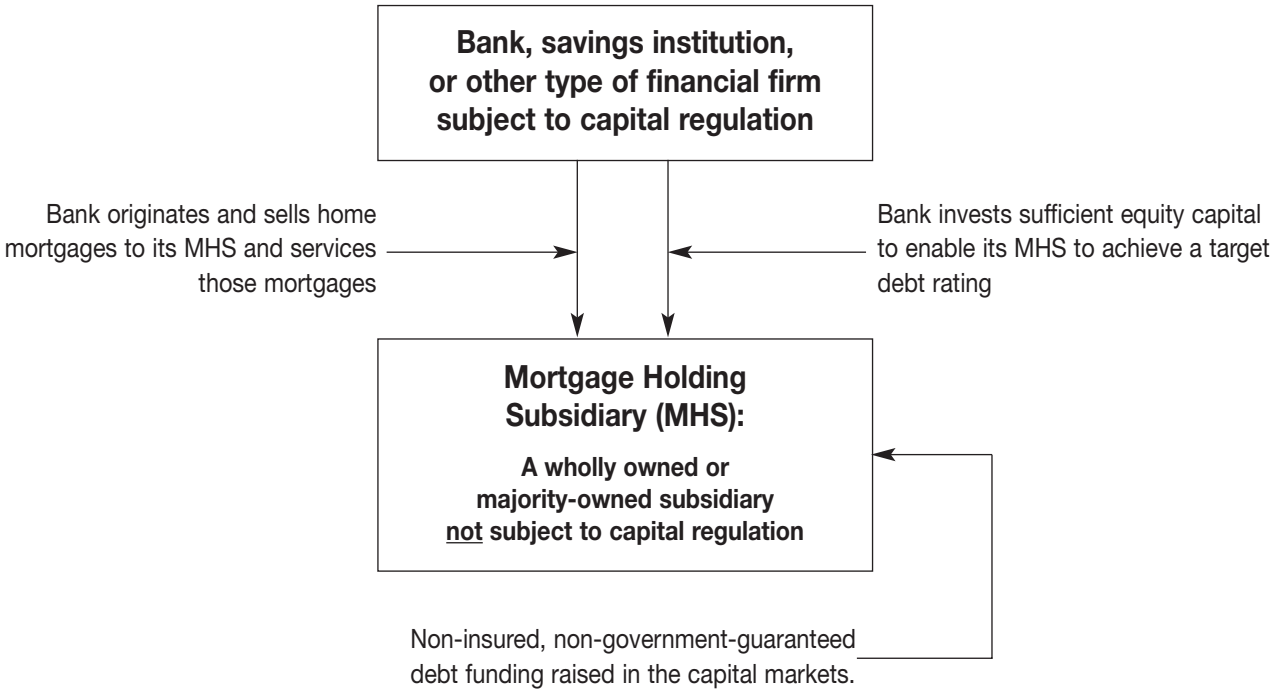
[2] Wallison, Peter; Stanton, Thomas H.; and Ely, Bert (2004) *Privatizing Fannie Mae, Freddie Mac, and the Federal Home Loan Banks: Why and How*, American Enterprise Institute, Washington, D.C.

[3] Kemmish, Richard, *Are you in?*, The Banker, 04 November, 2004, page 9.

Figure 1: The Mortgage Holding Subsidiary Concept



The following are key features of the MHS concept:

- MHS would be funded in the wholesale capital markets with medium- and long-term debt, reflecting the relatively long life of fixed-rate residential mortgages. This approach parallels the widespread practice in Europe of pfandbriefe financing, or funding long-term, fixed-rate mortgages with mortgage bonds or covered bonds sold in the capital markets, largely to institutional investors.

- MHS would not be subject to any regulatory capital requirements, either simple leverage ratios or the Basel risk-based capital standards. Instead, marketplace forces would determine the capitalization of an MHS. MHS owning higher risk mortgages or retaining substantial interest rate risk would have to carry more capital than MHS with low-risk mortgages and no retained interest-rate risk. Because of the high credit quality of most residential mortgages, the tradeoff between the cost of an MHS's equity capital and the cost of its debt would tilt MHS towards capital levels that produce at least AA debt ratings, if not AAA. To strengthen the credit rating of unsecured MHS debt, MHS debt might be given a liquidation priority over other general unsecured creditors of the MHS should it become insolvent.

- There should be no limit on the number of MHS which can be chartered nor should they be chartered as banks – any bank or savings institution which wished to charter an MHS should be permitted to do so. However, the relationship between an MHS and its parent should be overseen by the parent's safety-and-soundness supervisor, strictly for the solvency protection of the parent institution. For example, in the United States, the relationship between an MHS and a parent which had been chartered as a national bank would be monitored by the U.S. Department of the Treasury's Office of the Comptroller of the Currency.

- The parent's investment in an MHS would be fully deducted from the assets and equity capital of the parent for the purpose of calculating the parent's compliance with bank capital requirements. Hence, the parent could not finance its investment in an MHS with deposits or borrowed funds.

- The parent would be barred from injecting equity capital into an MHS if that capital injection would drop the parent to an undercapitalized status. If a parent made such a capital injection, its supervisor could direct the immediate return of the capital to the parent. An illegal capital injection into an MHS should be treated on the books of the MHS as a secured loan superior to all unsecured claims on the assets of the MHS so that the capital can quickly be returned to the parent.

Figure 2: Composition of an MHS balance sheet
(not to scale)

Assets	=	Liabilities + equity capital
Residential mortgages securitized "in situ" (in-situ securitization, or ISS)		ISS debt (debt incurred by mortgages securitized "in-situ")
Residential mortgages		Callable, noncallable debt secured by the mortgages
Residential mortgages (one-family and multi-family)		Unsecured "preferential" debt raised in the capital markets
		Other unsecured liabilities
Cash + short-term investments		Subordinated debt
Other assets		Equity capital

- An MHS could issue stock to third parties (including other banks and savings institutions), subordinated debt, unsecured debt, preferential unsecured debt, covered bond arrangements, and secured debt. Secured debt could be secured by a specified group of mortgages under the "in-situ securitization" concept discussed below. For financial reporting purposes, the MHS's financial statements should be consolidated with its parent in accordance with Generally Accepted Accounting Principles.

- Because the MHS would be a passive financing vehicle, with few if any employees, it could be managed by its parent bank, it could share officers and directors with the parent, purchase mortgages from the parent (as well as from third parties), and contract with its parent to service those mortgages. This relationship would be closer than what exists in many securitization or covered-bond arrangements and hence more efficient.

- There should be no restriction on the size or type of residential mortgages the MHS could purchase from its parent or from third parties. In addition to owning mortgages on primary residences, MHS should be permitted to hold mortgages on holiday homes, apartment buildings, university dormitories, nursing homes, and other residential structures. At the same time, the MHS's parent should have complete latitude in determining which mortgages to sell to its MHS and which ones to keep on the parent's balance sheet. Quite likely, the parent would retain adjustable rate mortgages and fixed-rate mortgages with short maturities, funding them with deposits, while selling long-term, fixed rate mortgages to its MHS.[4] By the same measure, the parent might buy back from its MHS long-term, fixed-rate mortgages just a few years short of maturity.

- When interest-rate levels declined, triggering mortgage refinance activity, the MHS could lower the cost of refinancing mortgages by simply adjusting the interest rate on the mortgage and recalculating the monthly payment. It could profitably fund the lower interest rate on the mortgage by calling higher cost debt and replacing it with lower-cost debt.

- In order to operate as efficiently as possible, particularly in dealing with mortgage refinances, the MHS could, to the extent tolerated by the financial marketplace, operate as one giant mortgage pool financed by preferential unsecured debt. However, when market conditions so demanded, the MHS could create pools of mortgages

[4] An October 2003 report by consultants' Mercer Oliver Wyman, *Study on the Financial Integration of European Mortgage Markets*, for the European Mortgage Federation had this to say about funding mortgages (page 63): "The mortgage bond appears to be an efficient mechanism for funding long term fixed rate products but possibly less efficient for short-term products where the flexibility of deposits make this a more attractive option."

funded by debt secured by the mortgages, through in-situ securitization, or it could sell mortgages into a bankruptcy-remote securitization trust which would issue mortgage-based securities (MBS).

- MHS could enter into interest-rate swaps and other interest derivatives to hedge interest-rate and prepayment risk. They also could enter into credit-derivative transactions to shift a portion of geographical or credit-quality concentrations to third parties.

POTENTIAL MHS COST SAVINGS

In essence, the MHS concept would make it financially feasible for mortgage originators to originate long-term, fixed-rate mortgages that they could hold to maturity in an MHS rather than originate them for eventual sale or securitization.

The sound public-policy reason for permitting this is that ownership of an MHS should not endanger the solvency of the parent bank or other type of depository institution because the parent's investment in an MHS should be fully deducted from the parent institution's capital. Hence, should an MHS become insolvent (which should be a highly unlikely event), that insolvency would not endanger its parent's capital position. Moreover, limiting MHS to capital market funding would eliminate any rationale for applying bank-like regulation to MHS. Therefore, MHS should be highly capital efficient, which would generate significant cost savings by reducing the required profit spread incorporated in mortgage interest rates.

The cost argument underlying the MHS concept begins by differentiating the two major cost components associated with a mortgage — mortgage transaction costs (the cost of making and servicing a mortgage loan) and the pure cost of funding the mortgage.

Mortgage transaction costs

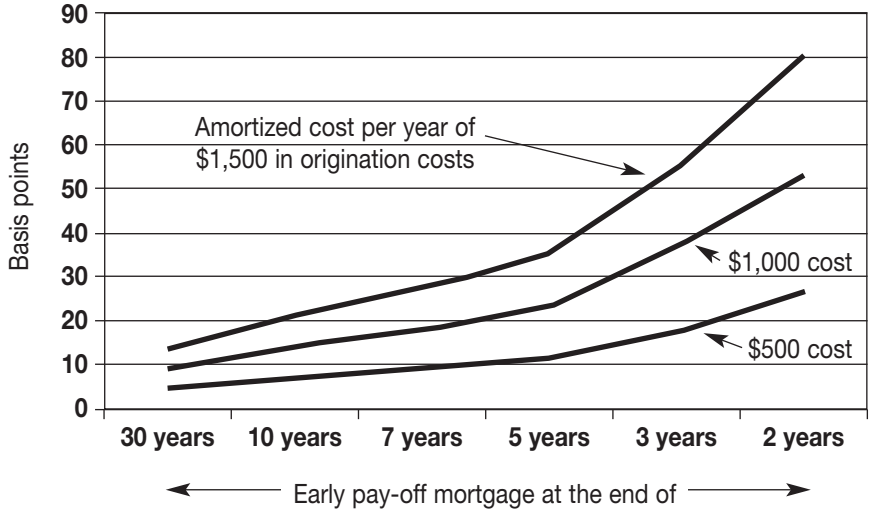
The MHS concept would enable banks, savings institutions, and other mortgage originators to reduce mortgage transaction costs – originating the mortgage and then servicing it – by originating long-term, fixed-rate mortgages to hold in their MHS rather than originating mortgages to sell in a secondary mortgage market. This would be the case because many costs in the origination process can be reduced or eliminated if the mortgage originator never intends to sell the mortgage to an unrelated party. Since origination costs vary greatly, depending on house price, mortgage amount, jurisdiction where the home is located, and how well the costs are identified and quantified, cost savings would vary from country to country.

Lower origination costs can reduce a homeowner's "all-in" mortgage interest rate by more than a few basis points. Seldom considered by borrowers, the all-in interest rate includes the amortization of any mortgage origination costs paid by the borrower, usually when the mortgage is originated, in addition to the mortgage interest rate. It is not possible to compute the all-in interest rate when a mortgage is originated if the actual life of the mortgage is not known because it can be paid off, through a house sale or refinancing, before the mortgage is fully amortized. Origination costs can add significantly to the all-in rate if the mortgage is outstanding for just a few years.

For example, if a borrower incurs a cost of $1,500 in connection with originating a $100,000 mortgage, he might save up to $500, or one-third, if the originator sells the mortgage to its MHS rather than selling it into a secondary mortgage market. Cost savings on refinanced mortgages should be

Figure 3: Lowering origination costs significantly reduces the <u>all-in</u> mortgage interest rate

Based on a 30-year, $100,000 6% fixed-rate mortgage



much greater, perhaps by two-thirds, or $1,000, in case of the $100,000 mortgage example. These savings can be quite substantial, in terms of the amount expended and the actual, after-the-fact all-in interest rate. **Figure 3** illustrates the all-in interest-rate reduction for origination cost savings, based on actual mortgage lives. The savings are especially significant if a mortgage is refinanced frequently.

An example will further illustrate the significant impact of reducing origination costs. Assume an original 30-year purchase mortgage of $100,000, carrying an 8% interest rate, is refinanced every three years and then the home is sold at the end of the twelfth year, triggering a mortgage payoff. Further assume the mortgage was refinanced at the progressively lower rates of 7%, 6%, and finally 5.5%. Finally, assume an initial mortgage origination cost of $1,000 and a $500 charge for each refinance. This reduction in origination costs, from $1,500 per origination or refinance, spread over 12 years, would reduce the all-in mortgage interest rate by 31 basis points.

The cost savings, in basis points, for larger mortgages is not as great - because origination costs are lower in relation to the size of the mortgage - but still significant. For example, assuming a $200,000 mortgage with the same refinancing frequency and interest rates set out above (except for a $2,000 initial origination cost), the reduction in the all-in rate of interest would equal about 22 basis points over the life of the loan. This second example highlights a key advantage of the MHS concept - the benefits, in terms of reducing the all-in interest-rate, would be proportionally greater for smaller mortgages, which tend to be taken out by lower income families purchasing inexpensive homes. This feature should enhance the attractiveness of the MHS concept for those who believe lower mortgages rates are key to making home-ownership more affordable while expanding home ownership opportunities.

Mortgage servicing costs

Mortgage originators can trim their servicing expenses by originating mortgages to meet their own servicing standards, not industry standards governing the sale of mortgages, which may require additional costs. Thus, in addition to trimming origination costs, the MHS structure should reduce servicing costs by a few basis points per mortgage dollar outstanding by (1) not requiring the originator to prepare to sell the mortgage; (2) permitting the mortgage originator to integrate mortgage servicing more closely with other services provided to the homeowner; (3) reducing credit costs because of a broader customer relationship; and (4) increased cross-selling opportunities, particularly for property-related services such as property insurance, home equity lines of credit, and credit life insurance.

It is also more likely that homeowners would finance and refinance their mortgage where they have their primary banking relationship if the bank can retain the ownership of the mortgage in its MHS. This would allow the bank or savings institution to capture the synergies of an integrated customer relationship - an element that would also result in a lower mortgage interest rate. The value of the other benefits of this closer, more integrated customer relationship would vary from country to country, but in a recent study of the European mortgage market the authors noted that "there is strong evidence from interviews with mortgage lenders that the mortgage product is increasingly being seen as a 'gateway' product to gain access to the customer and use as a basis for cross-selling other products."[5]

Lowering mortgage funding costs

While MHS would fund themselves in whatever manner makes most economic sense at the time, MHS most likely would fund their mortgage assets with a combination of unsecured debt and secured debt raised through "in-situ securitizations" (ISS). Given their large asset size, MHS would issue debt in large tranches, which would make their debt extremely liquid.

Unsecured financing - an MHS could fund its mortgages with a combination of senior unsecured debt and subordinated debt, plus equity capital. In so doing, an MHS would assume full credit risk on the mortgages it owned plus whatever interest-rate and prepayment risk it did not hedge through on-balance-sheet maturity matching, callable debt, and off-balance-sheet interest-rate derivatives. The financial markets would determine the amount of capital backing for this portion of an MHS's balance sheet, based on (1) the riskiness of the mortgages financed in this manner, (2) the amount of interest-rate and prepayment risk the MHS had retained, and (3) management's target credit rating for the MHS debt.

In-situ securitization In-situ securitization, or ISS, is functionally equivalent to funding mortgages with MBS or covered bonds, except that with ISS financing, both the mortgages financed and the ISS debt remain on the MHS's balance sheet rather than being moved off-balance-sheet into a securitization trust or sold to an unrelated specialized mortgage financing entity issuing covered bonds. That is, as is the case with MBS, investors in ISS would assume all interest-rate and prepayment risk while the MHS, as issuer of the ISS, would retain all credit risk. However, mortgages financed with ISS debt would enjoy substantial origination cost savings because they would not be originated for sale in the secondary mortgage market. Instead, ISS-financed mortgages would be "kept in the family" by being sold by a mortgage originator to its captive MHS.

Structuring an ISS debt financing would work as follows: The MHS would set aside a group or pool of mortgages it owned and then grant an undivided security interest in those mortgages to the purchasers of the ISS debt financing the mortgages. In effect, just these mortgages would secure the debt

[5] Mercer Oliver Wyman, "Study on the Financial Integration of European Mortgage Markets," European Mortgage Federation, October 2003.

financing them. This financing arrangement would be comparable to a business financing a factory building with a syndicated loan secured by just that building. ISS debt could be structured as a simple pass-thru security or as a more complex, multi-tranche security. Either structure would pass through to the debt holders principal and interest payments as they were being made, less a profit and expense margin for the MHS.

In order to obtain an AA or better credit rating on its ISS debt, an MHS most likely would covenant to maintain at all times an over-collateralization of a particular ISS debt issue by a specified multiple of expected credit losses projected for the pool of mortgages securing the debt issue. Over-collateralization would ensure timely payment of principal and interest on the ISS debt. Based on the U.S. experience, the over-collateralization multiple most likely would fall in the range of 10 to 20 times the expected loss rate. For example, if the expected loss rate was two basis points annually, the over-collateralization would equal .2% to .4% of the amount of ISS debt then outstanding. Additionally, MHS most likely would guarantee the timely payment of principal and interest on ISS debt, on the slight chance that the over-collateralization proved to be insufficient during a time of severe economic distress.

Hence, the credit rating assigned to a particular ISS debt issue would reflect both the degree of over-collateralization backing the debt and the overall capital strength of the MHS. Due to the relatively low volatility of residential mortgage loan credit losses, an MHS's targeted pre-tax, pre-credit-loss return on its capital allocated to credit risk should exceed it actual credit losses, even in high-loss years. Consequently, it should be extremely rare for an MHS to dip into its capital to absorb credit losses.

Competition among MHS in selling their in-situ financing securities would force an optimal level of transparency in mortgages financed with in-situ securities, specifically with regard to prepayment characteristics. In particular, greater transparency would reduce any cross-subsidy now flowing from mortgages that prepay slowly to mortgages that prepay quickly where no prepayment penalty is charged. This cross-subsidy, which flows from the less well off to the better off, arises because the prepayment option in fixed-rate mortgages provides a benefit only when it is exercised; those who refinance more frequently tend to be higher income, more sophisticated borrowers.

By using the in-situ technique to finance mortgages originated by their parent banks, large MHS should be able to construct mortgage pools with large tranches of ISS securities. This would make in-situ securities quite liquid, which in turn would further reduce interest rates on home mortgages as marketplace competition pushed the benefits of greater liquidity through to borrowers, in the form of lower mortgage rates. Savings of even a few basis points per mortgage dollar financed would be significant, relative to a country's GDP, given the amount of home mortgage debt outstanding in most countries.

CONCLUSION

Housing finance is undergoing enormous change in much of the world, and particularly in Europe, as covered bond legislation is revised and expanded and as other forms of structured finance emerge. Basel II also will impact on housing finance in ways which are not yet fully understood. Further, there is strong interest in many countries in shifting towards a greater reliance upon long-term, fixed-rate home mortgages and away from variable rate housing finance funded largely by bank deposits. The MHS concept provides a vehicle for efficiently providing long-term, fixed-rate housing finance while maintaining the role banks and savings institutions have traditionally, and understandably, played in housing finance, yet avoiding the complexity and rigidity that Basel II capital requirements will impose on banks and other types of depository institutions.